

REMARKS

This reply is responsive to the Office Action mailed June 9, 2006. Prior to this Amendment, claims 1 and 4-17 are pending. In this Amendment, Applicant has amended claim 16 to clarify certain informalities raised in the Office Action, without surrendering claim scope and for reasons unrelated to patentability. Claims 1 and 4-17 remain pending.

Claim Objections

In the Office Action, claim 16 and claim 17, which depends from claim 16, were objected to because of informalities regarding the recitation in claim 16 of "contacting the first region of the apparatus of claim 13 with a semiconductor wafer; and contacting the second region of the apparatus of claim 13 with the semiconductor wafer." The Office Action asserted that because the first and second regions are located on the rigid segment, which is located between the fixed abrasive element and the resilient element, it is not readily apparent as to how the semiconductor is capable of contacting the first and second regions.

Independent claim 1, from which claim 13 depends, recites a limitation that the plurality of rigid segments is disposed between the fixed abrasive element and the resilient element. Applicant respectfully asserts that claim 16, as currently amended, makes clear that the fixed abrasive element of the apparatus of claim 13 contacts the semiconductor wafer, and that the contact occurs at a position proximate the first region. Applicant further asserts that claim 16, as currently amended, makes clear that the fixed abrasive element of the apparatus of claim 13 is additionally contacted with the semiconductor wafer at a position proximate the second region. claim 17 depends from claim 16, and therefore incorporates all limitations from independent claim 16 as currently amended for purposes of clarification. Withdrawal of the objection to claims 16-17 is therefore respectfully requested.

Rejection under 35 U.S.C. § 102(b)

Claims 1 and 4-17 stand rejected under 35 USC § 102(b) as purportedly being anticipated by Rutherford et al. (6,007,407). Applicant respectfully traverses the rejection to the extent that the rejection applies to the claims as currently amended.

In the Office Action, the Examiner states that Rutherford et al. discloses an apparatus for modifying the surface of a semiconductor wafer, the apparatus comprising: a textured three-dimensional, fixed abrasive element (16) comprising a plurality of abrasive particles; a resilient element (14); and a plurality of rigid segments (12) disposed between the fixed abrasive element and the resilient element.¹ The Office Action further asserts that the rigid segments (12) can include more than one layer of the same or different material.² Therefore, the Office Action asserts, the rigid elements (12) may consist of a plurality of rigid segments (12). Applicant respectfully disagrees with the characterization of Rutherford et al. as disclosing a plurality of rigid segments as Applicant presently claims.

As a threshold matter, the Office Action's use of the term "rigid segments (12)" as a substitution for the term "rigid elements (12)" actually used by Rutherford et al. is an improper importation of the Applicant's own teachings and disclosures into the prior art reference.³ The Examiner has apparently read into the teaching of rigid elements by Rutherford et al. Applicant's own teaching of a rigid element including a number of rigid segments. This is improper examination procedure.

Moreover, the Examiner has failed to show that Rutherford et al. teach or suggest a plurality of rigid segments at all. Applicant notes that nowhere in the Rutherford et al. specification is the term "segment" even used. In contrast, Applicant defines "rigid segments" within the specification as components of a "rigid element." "The rigid element 34 includes a number of rigid segments 22 spaced apart from each other by grooves 32."⁴ Applicant's Figures 1, 3, 5, and 6 each illustrate embodiments wherein grooves of various sizes, shapes and positions (32, 32a, 32b or 42a) extend into the rigid element 34, thereby defining a plurality of rigid segments 22. In contrast, the Examiner hasn't shown a single instance where Rutherford et al. teach or suggest grooves, or rigid segments spaced apart from each other by grooves. The Office

¹ Office Action mailed June 9, 2006, ¶¶ 4-5, *citing* Rutherford et al., Figure 1 and column 3, lines 29-43.

² *Id.*, *citing* Rutherford et al., column 5, lines 4-14.

³ *See Crown Operations Intl., Ltd. v. Solutia, Inc.*, 62 USPQ2d 1917 (Fed. Cir. 2000) ("There must be a teaching or suggestion within the prior art, within the nature of the problem to be solved, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources, to select particular elements, and to combine them as combined by the inventor.")

⁴ Applicant's specification, page 7, lines 13-16.

Action thus hasn't shown that Rutherford et al. teaches or even suggests "rigid segments" as presently claimed by the Applicant, without a corresponding teaching or suggestion of "grooves." Absent such a teaching or suggestion, the Office Action fails to establish that Rutherford et al. contains "all elements" of Applicant's claimed invention.

In order to support an anticipation rejection under 35 U.S.C. 102(b), it is well established that a prior art reference must disclose each and every element of a claim. This well known rule of law is commonly referred to as the "all-elements rule."⁵ If a prior art reference fails to disclose any element of a claim, then rejection under 35 U.S.C. 102(b) is improper.⁶ Applicant respectfully submits that the Office Action hasn't met its burden of showing that Rutherford et al. teaches or suggests a plurality of rigid segments. Because Rutherford et al. does not teach "rigid segments" at all, Rutherford et al. cannot anticipate Applicant's claim 1 under 35 U.S.C. § 102(b). The Examiner's rejection of claim 1 thus cannot be maintained and should be withdrawn.

Applicant further submits that independent claim 1 results in a structural difference between the claimed invention and the prior art which produces clear advantages over the art. To the extent that Rutherford et al. actually teach or suggest use of multiple rigid elements, the reference also teaches that such a plurality of rigid elements is present as separate layers interposed between the fixed abrasive article 16 and the resilient element.⁷ Thus, Rutherford et al. teach only that rigid elements may be used as separate layers.⁸ This is not the same as a teaching of a plurality of rigid segments disposed between the fixed abrasive element and the resilient element, as Applicant claims. Even if the plurality of rigid elements taught by Rutherford et al. were presumed to correspond to a plurality of rigid segments, the teachings of Rutherford et al. would require each rigid segment to reside in a separate layer. The Office

⁵ See *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81 (Fed. Cir. 1986) ("it is axiomatic that for prior art to anticipate under 102 it has to meet every element of the claimed invention").

⁶ *Id.* See also *Lewmar Marine, Inc. v. Barient, Inc.*, 3 USPQ2d 1766 (Fed. Cir. 1987); *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990); *C.R. Bard, Inc. v. MP Systems, Inc.*, 48 USPQ2d 1225 (Fed. Cir. 1998); *Oney v. Ratliff*, 51 USPQ2d 1697 (Fed. Cir. 1999); *Apple Computer, Inc. v. Articulate Systems, Inc.*, 57 USPQ2d 1057 (Fed. Cir. 2000).

⁷ Rutherford et al., column 3, lines 32-36.

⁸ Rutherford et al., column 5, lines 4-14.

Action thus fails to show where Rutherford et al. teach a plurality of rigid segments within a rigid element, as claimed by Applicant.

Nor does Rutherford et al. teach or suggest the advantages resulting from a plurality of rigid segments disposed between a fixed abrasive element and a resilient element as Applicant presently claims. “The grooves 32 render the rigid element 34 relatively more flexible than the rigid element without the grooves such that the rigid element 34 as a whole is capable of conforming to the surface of a semiconductor wafer while the individual segments 22 remain rigid.”⁹ “The presence of rigid segments in the subpad of the abrasive article provides an abrasive article that exhibits localized rigidity...”¹⁰ “The segmented rigid element, when combined with a fixed abrasive element, provides enhanced wafer uniformity while maintaining good planarization.”¹¹ Each of these advantages is absent from the teachings and suggestions of Rutherford et al. Claim 1 of Applicant’s presently claimed invention is thus novel and nonobvious in view of the prior art. Withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b) is requested, and prompt examination and allowance of all pending claims is requested.

In addition to the foregoing arguments, Applicant(s) submit that a dependent claim is considered allowable when its parent claim is allowed.¹² Claims 4-14 depend from independent claim 1. Claims 15-17, while directed to a method, incorporate all limitations of the apparatus of claim 13, which incorporates by reference all limitations of the apparatus of claim 1. Accordingly, provided independent claim 1 is allowed, all claims depending therefrom, or incorporating the limitations of claim 1 by reference, should also be allowed. For at least the foregoing reasons, the Office Action has not met its burden of showing that the prior art teaches or suggests Applicant’s claimed invention. The Examiner’s rejection of claims 1 and 4-17 under 35 U.S.C. § 102(b) as anticipated by Rutherford et al. is unwarranted and should be withdrawn.

⁹ Applicant’s specification, page 8, lines 2-5.

¹⁰ Applicant’s specification, page 5, lines 29-31.

¹¹ Applicant’s specification, page 6, lines 7-8.

CONCLUSION

Based on the foregoing, it is submitted that the application is in condition for allowance. Withdrawal of the objection to claims 16-17, and the rejection of claims 1 and 4-17 under 35 U.S.C. 102(b), is respectfully requested. Examination and reconsideration of the claims as currently amended are requested. Allowance of the claims at an early date is solicited. The Examiner is invited to contact Applicant's attorney if the Examiner believes any remaining questions or issues could be resolved.

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Date

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¹² *In re McCarn*, 101 USPQ 411 (CCPA 1954).